THE MISSISSIPPI RIVER.

Report of the Commission for the Past Year Satisfactory Results of the Work at All Points-Recommendations and Estimates for a National System of Levees Congress Asked to Give the Commission Power to Condemn Material.

WASHINGTON, Dec. 28. The report of the Mississippi River Commission, giving the progress of surveys and examinations in the improvement of that river since Dec. 1, 1882, was submitted to the Secretary of War to-day. It says: At the date of the last annual report, December of last year, work had been fairly inaugurated on Plum Point and Lake Providence reaches; also in the vicinity of Memphis and Vicksburg. Throughout December and January work was pushed with great vigor at Plum Point and Lake Providence. A considerable amount of mattress work was lost; an uncompleted pile of dikes also suffered considerable from accumulation of drifts and strong current. High water prevailed continuously until the end of July. During this period work was confined to dikes, which required constant watching and repairs. After the subsidence of the flood the construction of mattresses for bank revetment was resumed, but the season proved unusually sickly, labor scarce and inefficient. Noth ing, in consequence, was accomplished until the advent of cool weather. Since then work progressed rapidly. Every endeaver has been made to place the work in a safe condition if possible, and it is greatly to be feared this will only be partially accomplished, as funds available, the balance of last year's appropriation, only admit of carrying on operations till the middle of December, after which all work will have to cease until Congress makes further appropriation. An appropriation of \$1,000,000, made immediately, could be advantageously used. Experience the past year has shown the principles upon which the Commission based its work are perfectly sound, and in this respect no modification seems neces-sary, though in regard to details of construction some changes are called for. Con-traction works, consisting essentially of dikes of piling sustaining curtains or screens of brush, proved generally too weak. The great depth of water in which they must be maintained, the enormous ac cumulations of floating drift and long dura tion of high water, are the main points in which our experience differs from any previously noted with similar structures in other localities. This necessitated much more substantial work than was at first deemed necessary, with a proportionate increase in cost. It should, however, be noted in regard to these works upon which the main damage experienced has been concentrated, that they were not necessar-ily permanent and only intended to effect certain definite results, as sitting up cer-tain portions of the river bed. When this is accomplished their work, as a rule, ended, and then maintenance was no longer required. Revetment work undertaken whenever completed was proven entirely successful, and but slight modifications of general style and detail in construction will be found necessary.

Next to the scarcity of labor, the greatest difficulty has been in securing ample, timely supply of material used in the construction, especially brush and stone.

During the previous low water seasons Plum Point and Lake Providence reaches have been fully as shallow as any points on the river, yet during the present season was not less than twelve feet all through these reaches, and at Lake Providence during the lowest water over fifteen feet was reported. That such truly remarkable effects have been produced by works in an unfinished condition is extremely enin an unfinished condition is extremely encouraging as regards ultimate success of improvement. The Commission caused surveys to be made at New Madrid, Memphis, Helena and Choctaw reaches with a view to preparing detailed plans for their improvement when funds for the purpose are available. Allotments were made for several reaches, but owing to the non-passage of the river and harbor bill it was decided inexpedient to undertake work for the present, and such portion of New Madrid allotments as not expended for plants was reallotted to Plum Point and Lake Providence.

Providence.
Surveys ordered at the mouth of Red River and Lock Bay, Plaquemine, are not yet completed, owing to the extremely unhealthy character of the season, which rendered it almost impossible to keep a surveying party in the field. For the same reason the survey ordered at Natchez harbor was not undertaken.

At Memphis harbor work in progress at the date of the last report under special allotment by the Commission was completed, and the same is true of the reverment at

and the same is true of the revetment at Delta Point, La., opposite Vicksburg.

At New Orleans the construction of a mattress revetment at Carrollton Bend was

begun and is now in progress.
On all portions of the river under improvement repeated surveys have been made, to note any changes that might occur, especially those due to work constructed. At New Orleans, in addition, a series of discharge measurements covering nearly a year were also made. The Com-mission recommend to Congress that the next improvement be first undertaken at New Madrid, and the second at Memphis

Work under allotment made by the Com mission from the appropriation of August 2, 1882, for levees and outlets, was continued during the year on the levees unfinished before the flood of 1882. It is expected all will be finished before the expi-ration of this year. The Commission recommends a continuation of levee work next season in front of the Texas and Yazoo basins. The Commission state there are serious practical difficulties in the way of constructing a system of levees no higher than is necessary for the confinement of ordinary floods and at the same time protect them against disastens in the confinement. structing a system of levees no higher than is necessary for the confinement of ordinary floods and at the same time protect them against disastrous injury from great floods which occur at irregular intervals. It is obvious for secure protection of the valley from overflow there is necessary a system of levees high and strong enough to withstaud the greatest floods. No other means of protection, the Commission believe, is practicable or even possible. These facts suggest obviously the idea of co-operation for overflow in the maintenance of a levee system which shall serve at the same time the purpose of improvement of the channel and protection from overflow. And as a preliminary to the consideration of such suggestion, the probable cost of such system should be considered. For about half the distance below Cairo only one side of the river requires levees. For the remainder on this same side the hills are so near, at distances ranging from immediate contact to not over six or eight miles, that the volume of discharge over the intervening strip of bottom land is not considered of grave importance. By far the greater part of the required work is now in existence, having been constructed by riparian committees and owners for the purpose of land reclamation.

The Commission submit an estimate of the number of cubic yards of earthwork regained for levees of certain grades between Camero, Mo., and the forts below New Guleans, a distance of 1,553 miles, the total cost being 25 cents per cubic yard, estimated of the number of cubic yards of earthwork regained for levees of certain grades between Camero, Mo., and the forts below Red River. This section of the river is in a state of much greater stability than is found at any other part of its course be ow the junction of the fissouri. At a short distance below Red River it becomes narrower and deeper It has been leveed there for a great many years. No flood complications arise here as above from the return of overflow water which encapped from the river at a point highe

RECOMMENDATIONS.

In regard to future legislation the Commission recommend that provisions be made by law for condemnation by suitable proceedings of material for any work on the Mississippi improvement undertaken by the Government. The report says within the past year some serious inconvenience has been suffered from exorbitant demands made by land owners for brush and poles. These materials in most cases were worth little or nothing to the owner, and unsalable to any buyer except the Government at any price, but at the prices some owners asked they make a long item of cost. It is not believed there will be frequent occasion to resort to condemnafrequent occasion to resort to condemna-tion of private property if such proceed-ings are authorized, as in most cases the existence of power will be a sufficient pre-ventive of extortion, although cases may arise in which possession and exercise of power will be highly important. It is highly desirable also that Congress pre-scribe by law the extent to which material found on islands and bars in the river may be used without payment of damages. It is believed the supreme right of control and improvement of the rivers navigable for inter-State commerce vested in the United States carries with it the right frequent occasion to resort to condemnain the United States carries with it the right in the United States carries with it the right to use in the works of improvement without the consent of any individual owner, all such materials found within the limits of the river itself. It is recommended, also, that provision be made by law for retaining control by the Government of land built up by deposits induced by the work of improvement placed in the river-bed. This amounts in some instances to hundreds of acres, and in some localities riparian owners may be disposed to claim possession. alers may be disposed to claim possession, al-though to the detriment of improvement. It is expected in most such cases it will be found desirable to encourage the growth of trees upon newly made banks and oc-cupy them in that way many years, per-

iaps permanently.
It is regarded important also that a law be enacted for the punishment of any per-son who shall make a cut-off at any neck son who shall make a cut-off at any neck or point on the Mississippi River. The his-tory of the river indicates a tendency to recurring cycles of change. A cut-off is followed by a sudden increase of velocity of the current in its vicinity and by a rapid caving above and below. These are likely to cause other cut-offs, one after another, and then results a widely extended, long continued disturbance of the regimen of the river. During the continuance of such period works of improvement of the channel will be attended with the greatest difficulty. No great cut-off has occurred since that at Vicksburg in 1876, and the present corditions of the river in that respect are regarded as favorable. But conditions are lse existing for the introduction of a cycle of changes by making a single cut-off of in-jurious consequences, which it is impossi-ble to estimate. Such events have hap-pened in the past through the lawless acts of individuals, and against these stringent penalties should be provided.

Statements accompanying the report give estimates of funds required for the fiscal year ending June 30, 1884. Improvement of the Mississippi River below Cairo, \$3,000,000. For the fiscal year ending June Work at New Madrid reach 1,000,000; work at Memphis reach, \$650,000; salaries and expenses of the Commission for the next fiscal year, \$200,000. Of the appropriation for improving the river by the act of August 2, 1882, the balance on hand December 2, 1882, was \$2,388,60; amount expended to November 1, 1889, in-cluding outstanding liabilities estimated to January 1, 1884, \$2,187,733; balance availa-ble unpledged January 1, 1884, but which will be required from care of property and maintenance of organization the remainder of the fiscal year, \$200,269; balance available of the appropriation for New Orleans harbor November 1, 1883, \$109,378; improv-ing the mouth of Red River, \$38,841; Natchez

harbor, 15,331. the report are Major C. R. Suter, Henry Mitchell, B. M. Harrod, Rob't. S. Taylor and S. W. Ferguson.

A minority report was submitted by General C. B. Comstock. He says the appropriation of the \$11,443,750 mentioned by the Commission is too small for any ade-quate system of levees intended to prevent destructive floods (except intervals of fifteen or twenty years), to secure the property of inhabitants behind them from danger of destruction. As stated by the Commission, a thorough study of the sub-ject of levees has not yet been made. Until then accurate estimates are impossible, and the heights above flood of two or three feet at Columbus, ten feet at Ful-ton, four feet at Helena, and ten feet at Lake Providence are only approxi-mates. Such as they are, they make it impossible to concur in the estimate of \$11,-443,770 as the cost of general system of levees from Commerce, Mo., to the Forts, adequate to preserve that country from de-structive floods.

General G. A. Gilmore concurs in the report of the Commission with a single qualification that the value of levees as a factor in the problem of channel improvement, in preventing wide dispersion of flood waters, is not affirmed in the report in sufficiently positive terms and that clearness and prominence to which in his judgment it is

How Old May a Man Live?

In a Bessarabian province lives one Savtchuk, who, at last accounts, was one hundred and thirty years old. He is what is called a little Russian by birth. His eldest son is eighty-seven years old, and is far more decrepit than the father. The one family has multiplied into fifty families. The age of this Russian is, of course, not as well authenticated as that of old Parr, the Englishman. It has been noted that reported cases of extreme old age always occur in the ranks of the very poor whose date of birth can rarely be verified, while kings. nobles and mem-bers of noted families, whose records are kept, in no age or country have ever lived a hundred years. Generalizing from this fact, a distinguished English writer, Mr. Lewes, gives it, as his judgment, that it is very doubtful if any human being can claim the distinction of being a centenarian. Yet from the analogy of the animal races, every child that is well born should live a century. The rule seems to be that animals live five times the length of their adolescence, that is they ought to live five times longer than the period it takes to attain their full growth. There is no question but what the whole human race does not enjoy the health and vigor which it is possible to attain. There is some defect in the constitution of even the strongest of our race. In the golden age of humanity yet to come, every child will be well born. Its life and hab'ts will conform to the scientific laws controlling our existence on this earth, and then man's environment will help him to achive the highest possible physical vitality. Toare born with weak strains in their blood. They eat improper food, use hurtful stimulants as drink. They are poisoned by malarias and subject to contagions due to their surroundings. The two great objects of the best men and women in this life should be first to improve the race itself, morally and physically, and secondly, to make this earth on which man lives a fit abode for the superior people who will then occupy it. Demorest's Monthly.

-A citizen of Meridian, Miss., recently got a post-office order at that place and paid the amount with 850 copper cents.

No Democratic Mistakes.

When the Republicans attempted to seek comfort for the thorough drub-bing they received a year ago, they af-fected to find it in the supposed blun-dering infirmity of their victors. They even fixed the time for the Democratic mistake, and with a generosity that was positively marvelous, offered to assist them into committing it. In the elections of last year the Democracy had wrested the popular branch of Congress-the real seat of power, in this as in every other free country-from their hands and sent them to the background as a party which had forfeited the confidence of the people. The organization of the new House—frequenty a delicate and difficult task, when the governing party's candidates for Speaker represent different sides in a and \$31,393,066 more than in 1882. sharp issue-was set for the most opwould be the initial and irreparable ing 1883, exhibit a like increase: fatuity from which an endless progeny of blunders would inevitably follow; and the Republicans made up their minds that this initial and necessary misstep should be taken. They resolved that one of the ablest and certainly most distinguished Democratic 1880. Dem. House of Rep. 174, 743,606 1880. D member of the House should be the agent in it. They resolved that Mr. Randall should be, a second time, Speaker of the Democratic House if they could bring it about. And it must be conceded that their choice was wisely made. Mr. Randall possesses many merits to commend him to his party. His experience and courage; his habit of rapid and accurate decision; his familiarity with legislation, and the honors he has heretofore won for his party-all combine to give him business, this surplus is likely to be claims on his party which, at any other larger than smaller in succeeding years time than the present, could not be set aside in favor of another. And behind all these was still another fact that weighed heavily on his side; he was a over \$100,000,000 more than enough to representative from a powerful North-ern State, while his chief opponent deemable without paying high premicame from a section which, it has been ums. The Secretary says the same anassumed for over tweaty years, could not be safely admitted to the honor of a \$100,000,000 left after paying the 41 position only two degrees removed from per cents.. would amount to about \$1,the Presidency.

of their well-planned enterprise with 000,000. admirable skill and address. Their press gave Mr. Randall a unanimous support. Not one Republican newspaper espoused the cause of Mr. Carlisle. All united in asserting and reasserting that crats should make Speaker; and all Carlisle the worst of all, since it would the pockets of the people unnecessarily. Alarm the industrial interests of the Yet everwhere is heard the Regublican country and cause a revolt of public feeling against Democratic methods.

them infinite credit, and is full of future | high-pressure principle. promise, went past the distinguished Southern States-not because he was not committed the mistake fondly pre-Carlisle, a man warmly supported by that wise and cool-headed counselor, Morrison, of Illinois, gained a fresh claim on the confidence of the country scrupulous. -and that, too, without in the slightest degree giving uneasiness to the industrial interests which his distinguished competitor from Pennsylvania was supposed to represent .- St. Louis Repub-

Let the Radical Rave.

If the Democrats had carried out a negative policy by electing a Speaker of the House of Representative who would have done nothing during the session of the Forty-eighth Congress, the Republicans would have pointed to the Democratic party in 1884 as a party of silence and equivocation. And now that a But no R fearless man of honest convictions has been chosen-a man who stands as the exponent of an intelligent policy, the Republicans are attempting to array the minority of our party against the majority, hoping to cause a split in time for the Presidential campaign.

But the Democratic party was never more united than it is to day, and all insiduous attempts to cause disaffection will prove futile. The Republican press, with a few exceptions, is attacking the Carlisle policy; but so much the better for the Democrats. Opposition to rings and jobs, revenue reform and honest administration of public affairs will constitute the ground upon which the Democrats will work and fight. The Republican party would try to make capital out of any course that the opposing party might adopt. Whether we remained in a negative, silent position, or whether we chose an aggressive policy, the Republicans would attack us. But the truth remains all the same that the Republican party is a party of corruption and sectional passion; that it connives at iniquity and lets rascals go unpunished; that its favorite method is to carry elections by Government machinery; that its object is to centralize the Government and thus suppress the voice of freedom; that its sympathies are with the monopolists as against the people. It does not surprise us, then, to see these corrupt politicians frantically crying out against the people's party, which represents the policy just the reverse of that of the corruption party. Speaker Carlisle is an outspoken statesman, and we have confidence in

a manner that will reflect the greatest credit upon the Democratic party. Let the Republicans continue with their ring-rule policy, and let the Democrats stand together in their opposition to Republican corruption, and the Democrats will win every time. We are satisfied that Congress will so administer the affairs of the people that the

be defeated in 1884. - Richmond State. twenty thousand rosebuds every day. in armor. - Baltimore Sun.

"Don't Reduce Appropriations."

The ordinary expenditures of the Federal Government for ten years, including the current fiscal year, exclusive of the interest on the public debt, exhibit a striking increase, as the following table will show:

Ordinary exp. (Dem. House)... Ordinary exp. (Dem. House)... 134,4/3 452 161,619,934 1880. Ordinary exp. (Dem. House)... 169,090,062
1881. Ordinary exp. (Dem. House)... 177,142,879
1882. Ordinary exp. (Rep. House)... 186,090,232
1883. Ordinary exp. (Rep. House)... 206,248,006
1884. Ordinary exp. (Rep. House)... 218,297,238 The expenditures for the current year

are thus \$41,154,419 more than in 1881 The total appropriations, including portune occasion for it. If the elated the interest on the debt and all extravictors could be decoyed into making ordinary expenditures, from the year an unfortunate choice for Speaker, this ended June 30, 1872, up to and includ-

1875. 1876. 1877. 1878. 1879. 1880. 159 356 251

Yet the Republicans, with very rare exceptions, unite in the shout. "Don't

reduce appropriations!' There is an unemployed surplus of more than \$100,000,000 now in the Treasury. The Secretary of the Treasury estimates that the surplus revenue for the fiscal year ending next June will be \$850,000 .-000. From the decrease of the interest on the debt and the natural increase of unless taxation is reduced. In seven years this annual surplus, even if not increased, will reach \$595,000,000, or nual surplus until July 1, 1907, with the 460,000,000, while the whole amount of The Republicans executed their part debt then redeemable is less than \$749,-

> Yet the cry is raised by the President and re-echoed generally by the Republican party: "Don't reduce the surplus!"

Prodigal expenditures, profligate apthe distinguished Pennsylvanian was propriations and a surplus beyond all the man of all others whom the Demo- our indebtedness, necessitate unnatural and oppressive taxation. The people united in warning the Democrats that complain. Business is depressed. The to choose any one else would be an ir- cost of living is increased. Directly reparable blunder-the election of Mr. | and indirectly money is squeezed out of

watchward: "Don't reduce taxation!" The Government is to be run on the But the scheme failed. It broke high-pressure principle. The debt is to down signally. The Democrats of the be paid on the high-pressure principle. House, with a composure which does The people are to be squeezed on the

To what end? In order that the spec-Democrat from Pennsylvania, and electial interests which have paid the Reed a Democrat from one of the so-called publican party for special protection may continue to enjoy it. In order that from that section, but because he pre- labor, which suffers from the increased sents the indispensable condition of cost of living, may continue to suffer, Democratic success in 1884. The Dem- and that monopolies and corporations ocratic House, therefore, has not only which have amassed immense fortunes through the pampering aid of Repubdicted and prepared for it by its op- licanism may continue to add to their ponents, but it has, in the election of weath. In order that the party in power may have control of an enormous corruption fund as a means of bidding for the support of the greedy and un-

Of course some use must be suggested for the surplus revenue. Establish Government free schools, say some, and thus add to the Post-office, Treasury and Judicial patronage, stretching into every township in the Union the patronage of school-teachers and other school officers, reaching to every school district. Give the surplus away to the States, say others. Let the Federal Government act as tax collector for the States, is Mr. Blaine's proposition. Cut ditches all over the land and improve coast defenses, is Secretary Chandler's

But with a few honorable exceptions no Republican voice is heard saying: reform taxation; reduce extravagant expenditures; discontinue corrupt subsidies and appropriations; do not be in undue haste to pay the debt; relieve the people and the business of the country by moderating taxation; give fair protection to American manufacturers; make the cost of living less than it is, and do not heap unnecessary burdens on the masses for the sole benefit of the favored few!

The Republican cry is of a different character. There are factions in the party-jealous, embittered, revengeful. But they are all ready to unite in the watchword: "Don't reduce taxation or appropriations!"-N. Y. World.

-Dr. T. L. Nichols in the Science Monthly asserts that any given territory will sustain from six to ten men on fruits, grains and vegetables to one on flesh. He writes: "Only the direst necessity, such as sometimes causes cannibalism, could have induced men to kill and eat other animals. Probably such feeding began with the lowest forms of life, as with oysters, for example. However the carnivorous tastes and habits of men may have arisen, there is no doubt of the sufficiency of a vegetable diet."

-The South Carolina State-House, which has been for many years in an unfinished condition, was planned to be a magnificent edifice, with a dome like that of the Federal capitol. Now Corinthian columns and great blocks of granite lie around in the yard, just as they were delivered by the stone-cutters: his ability to preside over the House in the groined roof is unplastered; the caps of the pillars are uncarved; and instead of a sightly dome there is a half story of clapboards with a tin roof -N. Y. Sun.

-The State Librarian of Virginia, Colonel Sherwin McRae, after studying for a decade the coat-of-arms of the Old Dominion, has produced a new dedominant party there will be in a better position to go before the country next tall than it has ever been before. Let Virtus standing with one foot on the the Radicals rave; but the Radicals must dead body of a tyrant, with the chains of subjection broken. The sword is -A New York florist claims to sell sheathed, and the figure is clothed in the garb of a Roman citizen instead of

Our Young Folks.

THE CHILDREN.

There is such a crowd of you, boys and girls
You are thronging in every place.
If we did not conquer you now and then
You would fill up all the space.

You take the world as if it were your own,
You merrily laugh and sing,
As if there were not a fading time,
And life could be always spring.

We send you out of the way sometimes, In the midst of your mirth and noise, For old heads ache, and old hearts fail, And can not share your joys.

But the world belongs to you, after all, And others aside must stand, That you may be able to do and dare, And be masters in the land.

You are so busy at school and play
That you have no thought to spare
For the problems that puzzle the grown-up And make them gray with care.

But you are the people, my happy ones; And all that we do to day Will be more to you than it is to us, For you will the longest stay. We are quick to give to you praise and blame What will you give us, when You weizh, as judges, our words and deeds In the time when you are the men?

What will you think of the laws we make
When you read the records through?
And the manners and customs of church and home, And the cities we build for you?

Boys, be generous: girls, be fair!
We are trying to do our best.
We are beginning some good brave work—
"Tis for you to do the rest.

Through misty moorland and fog-filled street,
We are seeking for greater light:
But for you there is breaking above the world
A day that is passing bright.

Toilers are we, who are well content To work for the Nation's need. We have been delving the gold to find, We have been sowing seed. Good times to live in we leave to you, And rights that were hard to win; Be worthy of the better times,

And gather our harvests in.

— Marianne Farningham, in London Christian

A SINGULAR RIVER.

With his fingers locked tightly in his crisp, curly hair, Jackman Rolf-Jack, for short-sat resting his elbow on the table, which supported a canvas-covered copy of Horseberg's Sailing Directions, on one of the open pages of which his eyes were steadfastly fixed.

Opposite him, in a similar attitude, was his brother. Sylvester, now in his fourteenth year, was two years younger than Jack. Before Sylvester lay a wellworn Physical Geography, open at the map of South America. He was sup-posed to be studying his day's lesson. In reality his mind was "far, far at sea." For Jack Rolf, who, as every one declared, was "a born sailer," had just returned from his first voyage with his father, Captain Merrill Rolf. He was full of enthusiasm for his new life, and could talk of little else but the sea and everything connected with it, to all of which Sylvester listened eagerly, particularly as Jack, being a keen observer, and possessing a good memory, was a most delightful talker. "I say, Jack."

No answer. In fancy Jack was ag clinging to the Paul Revere's weather mizzen-rigging, as she soudded at lightning speed before a terrible cyclone which they had encountered on the return passage. And Jack, aided by the map before him, was mentally compar-ing the route over which they had sailed, to escape running into the dreaded storm center, with the route there laid

"Jack!" this time rather louder. "Ay, ay, sir!" was the dreamy answer. And then, with a sudden start, Jack came back to his home surroundings-to the old-fashioned furniture, and his dead mother's picture over the mantel, and Sylvester opposite him yawning over his lesson.

"Well, what is it, Sillybub?" Jack asked. good-naturedly. "I should like to sail up the Amazon, the biggest river in the world," replied Syl, glancing at the map. He didn't really care in the least about the Ama-

zon, but he wanted to make Jack talk. "Three weeks ago I crossed a bigger and wider river than the Amazon ever pretended to be," said Jack, briskly, as, shutting the cover of his book with a bang, he leaned back in his chair and softly whistled an old sea-song.

"Why, Jack Rolf!" exclaimed Sylester. "Three weeks ago you were at "Yes," replied Jack, calmly, as he

fixed his gaze on the fly-studded ceiling, "and it is altogether different from any river that I ever saw or heard of." "How?" questioned Sylvester, curious to get at Jack's meaning. "Oh, every way." was the somewhat indefinite answer. In the first place,"

Jack continued, slowly, "it flows in a sort of immense circle—" "A river flowing in a circle!" scornfully interrupted Sylvester.

"-And there is one part of it," "—And there is one part of it," pur-sued his brother, "that for quite a long distance—some hundreds of miles, I think—flows up-hill."

"Oh, no doubt," was the ironical response. "Anything else?" Sylvester down-if I may so express it-the cir-cular flow of this wonderful river, but the up-hill movement was rather too

is," he went on, gravely, "this river I speak of never freezes, for two reasons; one is, that the water is almost warm; and the other, because it won't stop

"I don't see how it can run when it's all tied," interrupted Sylvester, with inward delight at being able to remember and bring into active service an old newspaper joke. Jack cast a pitying glance at his brother, but made no reply to such an

ill-timed attempt at wit. "The river of which I speak has no one definite source or outlet, though it

branches out in two or three directions. Another curious fact is, that while its surface is exactly level with the top of its oanks, it has never been known to overflow them during the heaviest rainfalls, or to lower the fraction of an inch during the driest seasons."

"Are its banks mud, or gravel, or rock, or what?" inquired Sylvester, who

upon whose mind the truth had suddenly dawned. "What a goose I was not to have known what you were driv-

Opening the thick canvas-covered book in which he had been reading. Jack called his brother to his side and directed his attention to a diagram of the Eastern and Western continents.

"Away down there, near the South American coast," said Jack, pointing to the spot with his finger, "the big Am-azon is all the time pouring an immense volume of water into the sea, which lies sweltering under a tropic

"Don't understand how the sea can swelter," broke in his irrepressible brother.

"That, my boy, is simply a figure of speech," was the unmoved answer. But to continue. This sun-warmed current, following the shore-line at a distance, passes through and carries with it the heated waters from what some scientific person has called the two great caldrons -the Caribbean Sea and the Gulf of Mexico. It then enters the Florida Straits, where some say that the Gulf Stream proper fairly commences, because here are its first two definite boundaries—Cape Sable on the one hand, and the Island of Cuba with

the Bahamas on the other." "But whereabouts does it begin to run up-hill?"

"Not far from Cape Sable," Jack replied, "though perhaps the expression that I used was rather too strong. What I meant was that the Coast Survey soundings have shown a gradual rise from this point, where the stream is about thirty miles wide, clear up to Cape Hatteras. where it is more than twice that width."

"And why does the Gulf Stream always run to the north and east?" "Well," replied Jack, slowly, "there are different theories on that point. The daily motion of the earth from east to west has something to do with it. Then, again, it is claimed that the waters of the Gulf Stream and its tributaries are salter than the sea which hems it in, consequently evaporation takes place faster, so that the water is always hurrying in to take the place of that which the thirsty trade-winds are lapping up. And perhaps the trade-winds, blowing steadily from the northeast, help to force this moving body of water in the direction of the Caribbean

And then, by the aid of diagrams, Jack showed his brother how this wonderful river in the sea, after following our own coast-line for hundreds of miles, splits in sunder above the fortieth parallel of latitude.

"This branch runs up to the north-ward and eastward," said Jack, pointing out the tiny arrow-heads marking its course, "while the other, tending due east, at last overflows its banks of salt sea, and is spread out over thousands of square miles along the European shores. Then describing a grand sweep, of which mid-ocean might be called the middle, it helps form the great equatorial current which in turn is swept to-

"But, Jack," said his brother, with a puzzled look, "why don't the Gulf Stream water mix with the ocean?"
"Well," Jack slowly replied, "that is pretty hard for me to explain, because I don't fully understand it myself. But as nearly as I do understand it," he continued, "it's something on the same principle as the fact that het and cold water don't unite in a dish till they're, so to speak, stirred up together pretty thoroughly. And then they say that bodies of water of different densities won't mix readily, which is another reason, for the Gulf Stream is consider-ably salter than the ocean which hems it in. But just see, Syl," Jack went on, warming with his subject—"just see how beautifully the Creator makes

you know." Sylvester didn't know, but nod led his assent, and Jack went on:

everything pull together, so to speak.

Now the earth is a conductor of heat,

"Well, if the Gulf Stream flowed directly over the bottom of the sea, it would soon loose its temperature. But the Almighty has so arranged it that away up in the Northern regions a polar current is set in motion, and comes sweeping down to meet the Gulf Stream somewhere near the Grand Banks. When it strikes the warm current it sinks to the bottom, and so puts itself between the stream and the bottom of the ocean, so that the water is kept at exactly the proper temperature."

"But what's the use of the Gult Stream, anyway?" persisted Sylvester. "Use of it?" echoed Jack; "I guess this would be a pretty uncomfortable country to live in if there was no Gulf Stream. Only for this current to carry away the heated water from the Gulf of Mexico and Caribbean Sea, the whole region down there would be a parched. sun-baked, dried-up desert, where no one could live nor anything grow. And the same excess of heat that it brings away from the torrid zone is spread out where it is most needed further north. had managed by a great effort to gulp It tempers our own climate to a slight extent, but its greatest power is felt across the ocean. But for the warmth it scatters broadcast in its eastern sweep, the British Islands, which are in much of a strain.

"Anything else?" repeated Jack—
"oh yes, lots. No matter how cold it freeze up solid, and France might have sleighing all the year round, for aught I know. Then, again, vessels bound from Southern to Northern ports get the advantage of its two and three knot currunning long enough for Jack Frost to get his grip on it, for there is always a three or four knot current or tide."

rent, and in winter, when they are 'iced up' on our own coast, a few hours' sailing brings them into warm water, which ing brings them into warm water, which melts off the ice and thaws out the sailors. Oh, I can tell you, Syl," said Jack, drawing his lecture to a close, as he caught his brother hiding a yawn, "the Gulf Stream is a great institution."

And as Sylvester came to think it all over afterward, he was of the same opinion.—Frank H. Converse, in Harper's Young People.

-All that remains of the first settlement of Virginia at Jamestown is a tower of the old church where Pocahontas was baptized. The font used in that service is said to be in the chancel of Christ Church, Williamsburg, Pa., where she was married in 1613 to John Rolf.—Washington Post.

was thoroughly mystified.

"Neither," his brother replied, gravely.

"Banks and bottom alike are of cold salt-water."

"Gulf Stream!" exclaimed Sylvester,

"Gulf Stream!" exclaimed Sylvester,